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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 13, 2007

David Gregory
Federal Project Director
Los Alamos Site Office
Department of Energy
528 35th Street, Mail Stop A316
Los Alamos, NM 87544

David McInroy
Remediation Services Deputy Project Director
Los Alamos National Laboratory
P.O. Box 1663, MS M992
Los Alamos, NM 87545

**RE: APPROVAL WITH MODIFICATIONS FOR THE PHASE II INVESTIGATION
WORK PLAN FOR MATERIAL DISPOSAL AREA (MDA) C, SOLID WASTE
MANAGEMENT UNIT 50-009, AT TECHNICAL AREA 50, LOS ALAMOS
NATIONAL LABORATORY (LANL),
EPA ID #NM0890010515
HWB-LANL-07-008**

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security LLC's (LANS) (collectively, the Permittees) *Phase II Investigation Work Plan for Material Disposal Area C, Solid Waste Management Unit 50-009, at Technical Area 50, Revision 1* (Work Plan), dated July 2007 and referenced by LA-UR-07-5083/EP2007-0453. NMED has reviewed this document and hereby issues this Notice of Approval with the following modifications.

General Comments:

1) Although it is NMED's understanding that the five new boreholes (50-A, 50-B, 50-C, 50-D, and 50-E) will be advanced from 0 to 300 feet using the hollow stem auger (HSA) drilling method, it is not entirely clear in the text. Core samples must be collected at 50-foot intervals and at least one sample must be collected from each stratigraphic unit (depending on unit thickness)

from 0 to 300 feet as each borehole is advanced. After the 300-foot depth is reached, pore-gas samples must be collected at each depth interval where core samples were collected for off-site laboratory analysis. The Permittees will then use the air-rotary drilling method to penetrate the upper portion of the Otowi Member of the Bandelier Tuff (approximately 450 feet). A pore-gas sample must be collected from within the uppermost portions of the Otowi (i.e., at least 20 feet into the unit), and submitted to an analytical laboratory for quick turn-around analysis of PCE and TCE. If pore-gas concentrations of PCE and TCE exceed $3800 \mu\text{g}/\text{m}^3$ and $2100 \mu\text{g}/\text{m}^3$ (Target Levels) respectively, the borehole will be extended 50 feet and another screening sample will be collected. The Permittees must continue to obtain screening samples every 50 feet until Target Levels are not exceeded. Termination depth (TD) shall be the depth from which pore-gas samples do not exceed the Target Levels. Once the TD has been determined, a FLUTe liner system with sampling ports corresponding to each stratigraphic unit will be installed in each borehole. The remaining pore-gas samples (300 to ~450 feet) will be collected following installation of the FLUTe system. Core samples from 300 to ~450 feet will be obtained from intervals corresponding to the pre-determined FLUTe system ports.

Existing boreholes drilled to 150 feet under the original Investigation Work Plan (IWP) for MDA C will be extended with the HSA drilling method to a depth of 300 feet. The air rotary method will then be used to extend the boreholes into the upper portion of the Otowi Member of the Bandelier Tuff. Pore-gas and core samples will be collected at the same intervals specified above; with the exception that sample collection will begin 50 feet below the TD accomplished under the original IWP.

For existing boreholes previously drilled to a depth of 250 feet, air-rotary drilling will be used to extend the borehole into the upper portion of the Otowi Member. The same sampling protocol described above will be employed.

2) NMED understands that the Permittees intend to submit diagrams of the FLUTe systems for each of the 14 boreholes for approval prior to installation. These diagrams will include, but are not limited to, the proposed locations of each vapor sampling port and the stratigraphic unit in which the port is located. NMED concurs with this approach. NMED will review and provide comments on these diagrams (when appropriate) in a timely manner.

Specific Comments:

1) Section 4.3, Collection of Subsurface Tuff Samples, page 8, paragraph 1:

Permittees' Statement: "As stipulated in the NMED letter dated June 25, 2007, three tuff samples will be collected in the first 50 feet of drilling at 10, 20, and 50 feet bgs at borehole locations 50-B, 50-D, and 50-E."

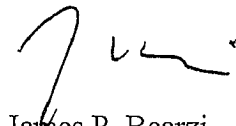
NMED Comment: The Permittees inserted a requirement for a 20 foot sampling interval rather than the 25 foot sampling interval required in NMED's Notice of Disapproval (NOD) referenced

above. Tuff samples will be collected in the first 50 feet of drilling at 10, 25, and 50 feet below ground surface (bgs) at boreholes 50-B, 50-D, and 50-E.

The Permittees must submit the Phase II Investigation Report by June 30, 2008, as specified in Section 6.0 of the Work Plan. The Notice Date for the Phase II Investigation Report will be October 31, 2008. All submittals (including maps) must be in the form of two paper copies and one electronic copy in accordance with Section XI.A of the Order.

Please contact Kathryn Roberts at (505) 476-6041 should you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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file: Reading and LANL TA-50 '07 (SWMU; 50-009)

